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                 "Ask CAS" for self-help around the clock
     2
NEWS
         FEB 27
                 New STN AnaVist pricing effective March 1, 2006
     3
NEWS 4
        MAY 10
                 CA/CAplus enhanced with 1900-1906 U.S. patent records
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        MAY 11
                 KOREAPAT updates resume
NEWS 6 MAY 19
                 Derwent World Patents Index to be reloaded and enhanced
NEWS
        MAY 30
                 IPC 8 Rolled-up Core codes added to CA/CAplus and
     7
                 USPATFULL/USPAT2
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     8
         MAY 30
                 The F-Term thesaurus is now available in CA/CAplus
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         JUN 02
                 The first reclassification of IPC codes now complete in
                 INPADOC
         JUN 26
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                 TULSA/TULSA2 reloaded and enhanced with new search and
                 and display fields
NEWS 11
         JUN 28
                 Price changes in full-text patent databases EPFULL and PCTFULL
NEWS 12
         JUl 11
                CHEMSAFE reloaded and enhanced
        JUl 14
NEWS 13
                FSTA enhanced with Japanese patents
        JUl 19
NEWS 14
                Coverage of Research Disclosure reinstated in DWPI
NEWS 15 AUG 09
                INSPEC enhanced with 1898-1968 archive
NEWS 16 AUG 28
                ADISCTI Reloaded and Enhanced
NEWS 17 AUG 30
                CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 18 SEP 11 CA/CAplus enhanced with more pre-1907 records
NEWS EXPRESS
             JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
              MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.
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```

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09/19/2006 Page 1

=> file reg COST IN U.S. DOLLARS

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 0.21 0.21

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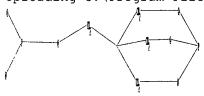
Please note that search-term pricing does apply when conducting SmartSELECT searches.

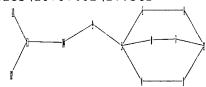
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

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=>

Uploading C:\Program Files\Stnexp\Queries\10707402\IV.str





chain nodes : 9 10 11 12 13 ring nodes : 1 2 3 4 5 6 7 8 chain bonds : 5-9 9-10 10-11 11-12 11-13 ring bonds : 1-2 1-6 2-3 2-7 3-4 4-5 5-6 5-8 7-8 exact/norm bonds : 4-5 5-6 5-8 7-8 10-11 11-12 11-13 1-2 1-6 2-3 2-7 3-4 exact bonds :

Match level :

5-9 9-10

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:CLASS 10:CLASS 11:CLASS 12:CLASS 13:CLASS

09/19/2006 Page 2

#### STRUCTURE UPLOADED L1

=> d L1 HAS NO ANSWERS

L1

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 10:00:32 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED -18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 2 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

\*\*COMPLETE\*\* BATCH

PROJECTED ITERATIONS: 106 TO 614

2 TO PROJECTED ANSWERS: 124

2 SEA SSS SAM L1 L2

=> s l1 full

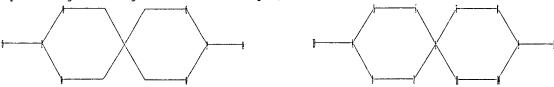
FULL SEARCH INITIATED 10:00:36 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED -317 TO ITERATE

41 ANSWERS 317 ITERATIONS 100.0% PROCESSED

SEARCH TIME: 00.00.01

41 SEA SSS FUL L1 L3.

=> Uploading C:\Program Files\Stnexp\Queries\10707402\III.str



chain nodes :

12 13

ring nodes :

1 2 3 4 5 6 7 8 9 10 11

chain bonds :

4-13 9-12 ring bonds : 1-2 1-6 1-7 1-11 2-3 3-4 4-5 5-6 7-8 8-9 9-10 10-11 exact/norm bonds :

1-2 1-6 1-7 1-11 2-3 3-4 4-5 4-13 5-6 7-8 8-9 9-10 9-12 10-11

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLASS 13:CLASS

STRUCTURE UPLOADED L4

=> s 14SAMPLE SEARCH INITIATED 10:00:57 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 54 TO ITERATE

54 ITERATIONS 29 ANSWERS 100.0% PROCESSED

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\* \*\*COMPLETE\*\* BATCH PROJECTED ITERATIONS: 640 TO 1520 PROJECTED ANSWERS: 257 TO 903

29 SEA SSS SAM L4 L5

=> s 14 full

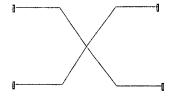
FULL SEARCH INITIATED 10:01:04 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 968 TO ITERATE

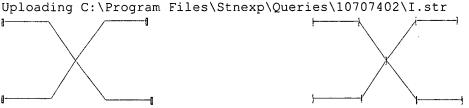
100.0% PROCESSED 968 ITERATIONS 480 ANSWERS

SEARCH TIME: 00.00.01

1.6 480 SEA SSS FUL L4

=>





chain nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

1-2 2-3 3-4 3-6 3-8 4-5 6-7 8-9

exact/norm bonds : 1-2 4-5 6-7 8-9 exact bonds : 2-3 3-4 3-6 3-8

Match level :

09/19/2006

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS

#### L7 STRUCTURE UPLOADED

=> s 17

SAMPLE SEARCH INITIATED 10:01:24 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 7524 TO ITERATE

26.6% PROCESSED 2000 ITERATIONS 50 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 145280 TO 155680 PROJECTED ANSWERS: 4089 TO 5993

L8 50 SEA SSS SAM L7

=> s 17 full

FULL SEARCH INITIATED 10:01:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 147461 TO ITERATE

100.0% PROCESSED 147461 ITERATIONS 5851 ANSWERS

SEARCH TIME: 00.00.01

L9 5851 SEA SSS FUL L7

=> file caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 500.82 501.03

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http://www.cas.org/infopolicy.html

09/19/2006 Page 5

=> s 13 and 16 and 19 50 L3

2335 L6 14457 L9

L10 4 L3 AND L6 AND L9

=> d ibib abs hitstr 1-4

L10 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:763095 CAPLUS

DOCUMENT NUMBER: 135:319067

TITLE: Acid-methylol compound reaction products for flame

resistance

INVENTOR(S): Kasowski, Robert Valentine; Kasowski, Maya Meltzer

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077217	A1	20011018	WO 2001-US9514	20010327
			ES, FI, GE, HR, HU,	
JP, KP, KR,	LU, MK	, MX, NO,	NZ, PL, PT, RO, RU,	SE, SG, TR, UA,
			MD, RU, TJ, TM	
RW: AT, BE, CH,	CY, DE	, DK, ES,	FI, FR, GB, GR, IE,	IT, LU, MC, NL,
PT, SE, TR				
US 2004039085	A1	20040226	US 2002-275239	20021029
PRIORITY APPLN. INFO.:			US 2000-195703P	P 20000407
			US 2000-196944P	P 20000413
			US 2000-213379P	P 20000623
			WO 2001-US9514	W 20010327

This invention relates to novel flame retardants (FR) resulting from the AΒ reaction of (a) or (b) with (c) where (a) is a compound containing at least one amine group and with at least one sixteenth of the amine mols. having at least one methylol bond, (b) is a phenol with at least one sixteenth of the phenol mols. having at least one methylol bond, and (c) is a mineral acid, organic acid, and organo-phosphorous acid, or a mixture thereof and optionally adding a polyhydric compound and/or optionally adding formaldehyde to the acid. These compns. are for use in general flame retardant applications such as coatings, adhesives, and articles made of polymeric materials. The FR mechanism by which these compds. generally perform as an FR agent is intumescence but the field of this invention is not restricted to that mechanism. Some of the compds. have substantial intumescence and others have very little intumescence but still are flame retardants. A typical fireproofing agent was manufactured by heating 37.9 g melamine 15-30 min at  $90^{\circ}$  with 10.4 g paraformaldehyde in 170 g water, and adding the resulting methylolmelamine solution to water containing pyrophosphoric acid in 3-5 min.

IT 115-77-5DP, Pentaerythritol, reaction products with methylolmelamine and polyphosphoric acids 947-28-4DP, Pentaerythritol diphosphate, reaction products with methylolated amines 89676-40-4DP, Dipentaerythritol triphosphate, reaction products with methylolated amines RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP

(Preparation); USES (Uses)

(acid-methylol compound reaction products for fireproofing agents for

09/19/2006 Page 6

polymers)

RN 115-77-5 CAPLUS

CN 1,3-Propanediol, 2,2-bis(hydroxymethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-CH}_2-\text{OH} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

RN 947-28-4 CAPLUS

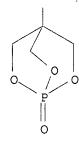
CN 2,4,8,10-Tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-dihydroxy-, 3,9-dioxide (9CI) (CA INDEX NAME)

RN 89676-40-4 CAPLUS

CN 2,6,7-Trioxa-1-phosphabicyclo[2.2.2]octane-4-methanol, hydrogen phosphate, 1,1'-dioxide (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

Journal

ACCESSION NUMBER: 1984:192898 CAPLUS

DOCUMENT NUMBER: 100:192898

TITLE: Fire retardancy of thermoplastic materials by

intumescence

AUTHOR(S): Halpern, Yuval; Mott, Donna M.; Niswander, Ronald H.

CORPORATE SOURCE: Cent. Res. Lab., Borg-Warner Chem., Des Plaines, IL,

60018, USA

SOURCE: Industrial & Engineering Chemistry Product Research

and Development (1984), 23(2), 233-8

CODEN: IEPRA6; ISSN: 0196-4321

DOCUMENT TYPE:

LANGUAGE: English

GΙ

$$\begin{bmatrix}
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O + P & O$$

The intumescent, fire-retardant phosphate dimelamine salt (I) [70776-17-9] and melamine phosphate (II) [89676-41-5], prepared from pentaerythritol [115-77-5], melamine, and POCl3, are sufficiently thermally stable for processing in thermoplastics. They are effective fire retardants for polypropylene [9003-07-0] at concns. ≥20%. Both are more efficient than conventional halogen-Sb retardants, and have a less adverse effect on phys. properties.

IT 70776-17-9 89676-41-5

RL: USES (Uses)

(fire retardant, intumescent, for plastics)

RN 70776-17-9 CAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, compd. with 3,9-dihydroxy-2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane 3,9-dioxide (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 947-28-4 CMF C5 H10 O8 P2

CM 2

CRN 108-78-1 CMF C3 H6 N6

RN 89676-41-5 CAPLUS

CN 2,6,7-Trioxa-1-phosphabicyclo[2.2.2]octane-4-methanol, hydrogen phosphate, 1,1'-dioxide, compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 89676-40-4 CMF C10 H17 O12 P3

CM 2

CRN 108-78-1 CMF C3 H6 N6

115-77-5, reactions RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with phosphoryl chloride)

RN 115-77-5 CAPLUS

CN 1,3-Propanediol, 2,2-bis(hydroxymethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO---} \text{CH}_2-\text{C---} \text{CH}_2-\text{OH} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

L10 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1976:561241 CAPLUS

DOCUMENT NUMBER: 85:161241

TITLE: Polycyclic phosphate esters

INVENTOR(S): Batorewicz, Wadim PATENT ASSIGNEE(S): Uniroyal, Inc., USA

SOURCE: U.S., 7 pp. CODEN: USXXAM

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 3970726	 А	19760720	US 1975-543289	19750123
	ZA 7507361	A	19761124	ZA 1975-7361	19751124
	AU 7587073	A1	19770602	AU 1975-87073	19751128
	AU 499115	B2	19790405		
	DE 2559371	A1	19760729	DE 1975-2559371	19751231
	FR 2298553	A1	19760820	FR 1976-1585	19760121
	FR 2298553	В1	19790309		
	JP 51098224	A2	19760830	JP 1976-5527	19760122
	PL 105884	P	19791130	PL 1976-186703	19760122
	NL 7600743	A	19760727	NL 1976-743	19760123
	US 4054543	Α	19771018	US 1976-663173	19760302
PRIO	RITY APPLN. INFO.:			US 1975-543289 A	19750123
		_			

AB Fireproofing agents for polyurethane precursors to be foamed were made by reacting PCl3 with pentaerythritol [115-77-5] and either oxidizing-esterifying the product, or treating it with ethylene oxide [75-21-8] and chlorinating the product. Thus, the spiroadduct [3643-70-7] of pentaerythritol and PCl3 was oxidized and esterified with EtOH to give the Et ester. The latter was mixed with 1-(aminoethyl)piperazine-propylene oxide adduct, methylenebis(phenyl isocyanate), surfactants, curing agent, and blowing agents to give a polyurethane with 0 index 24.5, in contrast with the value of 20.6 when no fireproofing agents was used.

IT 60860-22-2P 60860-23-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and esterification of)

RN 60860-22-2 CAPLUS

CN 2,4,8,10-Tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-bis(2-chloroethoxy)-(9CI) (CA INDEX NAME)

60860-23-3 CAPLUS RN

Phosphonic acid, mono(2,6,7-trioxa-1-phosphabicyclo[2.2.2]oct-4-ylmethyl) CN ester (9CI) (CA INDEX NAME)

115-77-5, reactions ΙT

RL: RCT (Reactant); RACT (Reactant or reagent)

(with phosphorus trichloride)

RN 115-77-5 CAPLUS

1,3-Propanediol, 2,2-bis(hydroxymethyl)- (9CI) (CA INDEX NAME) CN

$$_{\rm CH_2-OH}^{\rm CH_2-OH}$$
 HO-  $_{\rm CH_2-CH_2-OH}^{\rm CH_2-OH}$ 

L10 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

1973:465706 CAPLUS ACCESSION NUMBER:

79:65706 DOCUMENT NUMBER:

Formation of isomeric diphenylpentaerythritoldiphosphi TITLE:

tes during the transesterification of triphenyl

phosphite with pentaerythritol

Gubaidullin, R. N.; Eganov, V. F.; Arshinova, R. P.; AUTHOR(S):

Mukmenev, E. T.

Inst. Org. Fiz. Khim. im. Arbuzova, Kazan, USSR CORPORATE SOURCE:

Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya SOURCE:

(1973), (5), 1116-18 CODEN: IASKA6; ISSN: 0002-3353

DOCUMENT TYPE: Journal LANGUAGE: Russian

For diagram(s), see printed CA Issue. GΙ

P(OPh)3 heated with C(CH2OH)4 at  $100-20^{\circ}$  in vacuo gave 5 AB

transesterification products, from which the diphenyl pentaerythrityl diphosphite (I) was isolated in over 50% yield. This also formed from bicyclic pentaerythrityl bis-phosphorochloridite and PhOH in the presence of PhNH2 in CHCl3-C6H6. Bicyclic phosphite of 3 functional groups of

pentaerythritol reacted with P(OPh)3 similarly to form II, which proved to be the other major (30%) product of the original reaction above.

IT 144-35-4P 42022-83-3P

RN 144-35-4 CAPLUS

CN 2,4,8,10-Tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-diphenoxy- (9CI) (CA INDEX NAME)

RN 42022-83-3 CAPLUS

CN Phosphorous acid, diphenyl 2,6,7-trioxa-1-phosphabicyclo[2.2.2]oct-4-ylmethyl ester (9CI) (CA INDEX NAME)

IT 115-77-5, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
 (transesterification of triphenyl phosphite by)

RN 115-77-5 CAPLUS

CN 1,3-Propanediol, 2,2-bis(hydroxymethyl)- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO---} \text{CH}_2-\text{C---} \text{CH}_2-\text{OH} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

=> file casreact COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	21.36	522.39
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-3.00	-3.00

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FILE CONTENT: 1840 - 17 Sep 2006 VOL 145 ISS 12

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 16 L11 40 L6

=> s 13 and 16 and 19 6 L3

40 L6 275 L9

L12 0 L3 AND L6 AND L9

=> d 1-40 111

L11 ANSWER 1 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

RX(2) OF 9

C1—P

P—C1

NaOCH2Ph, PhMe

REF: Jpn. Kokai Tokkyo Koho, 2004149443, 27 May 2004

NOTE: alternative prepn. shown

CON: STAGE(1) room temperature -> 5 deg C; 2 hours, 5 deg C; 30 minutes, 5 deg C -> room temperature; 1 hour, room temperature

L11 ANSWER 2 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

RX(2) OF 3

REF: Jpn. Kokai Tokkyo Koho, 2004099500, 02 Apr 2004

NOTE: alternative prepn. shown CON: STAGE(1) 15 deg C; 30 minutes, 20 deg C

L11 ANSWER 3 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

Jpn. Kokai Tokkyo Koho, 2004083538, 18 Mar 2004

STAGE(1) room temperature; room temperature -> 5 deg C STAGE(2) 1 hour, 5 deg C; 20 minutes, room temperature CON:

L11 ANSWER 4 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

RX(2) OF 3

Jpn. Kokai Tokkyo Koho, 2004083537, 18 Mar 2004 REF:

STAGE(1) room temperature -> 5 deg C; 60 minutes; 20 minutes, CON:

room temperature

L11 ANSWER 5 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

RX(2) OF 10

Jpn. Kokai Tokkyo Koho, 2004035481, 05 Feb 2004 STAGE(1) <10 deg C; 1 hour

CON:

L11 ANSWER 6 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

RX(2) OF 2

Jpn. Kokai Tokkyo Koho, 2004035472, 05 Feb 2004
STAGE(1) room temperature -> 5 deg C; 1 hour, 5 deg C; 2 hours, CON:

5 deg C

L11 ANSWER 7 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

2 Na

REF:

Jpn. Kokai Tokkyo Koho, 2004035471, 05 Feb 2004
STAGE(1) 5 minutes, room temperature; 1.5 hours, 5 deg C CON:

L11 ANSWER 8 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

RX(1) OF 1 
$$\begin{array}{c} \text{CH}_2\text{-OH} \\ \text{HO-CH}_2\text{-C-CH}_2\text{-OH} \\ \text{CH}_2\text{-OH} \\ \text{(step 1)} \end{array} \begin{array}{c} \text{HO-CH}_2\text{-CH}_2\text{-Ph} \\ \text{(step 2)} \end{array} \begin{array}{c} \text{1. Pyridine, PhMe} \\ \frac{2. \text{ PhMe}}{3. \text{ NaOH, Water}} \end{array}$$

REF:

Jpn. Kokai Tokkyo Koho, 2004035467, 05 Feb 2004
STAGE(1) 30 minutes, 120 deg C; 1 hour; 30 minutes, 60 deg C
STAGE(2) 40 minutes; 30 minutes, 20 deg C CON:

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RX(1) OF 1
$$\begin{array}{c} \text{CH}_2\text{-OH} \\ \text{HO-CH}_2\text{-C-CH}_2\text{-OH} \\ \text{CH}_2\text{-OH} \\ \end{array} \begin{array}{c} \text{1. Et3N, PCl3, Xylene} \\ \text{2. PhCH2OH, Et3N} \\ \text{3. NaOH, Water} \\ \end{array}$$

REF: Jpn. Kokai Tokkyo Koho, 2004035465, 05 Feb 2004

NOTE: alternative prepn. shown

CON: STAGE(1) 30 minutes, room temperature; room temperature -> 60 deg C

STAGE(2) 1 hour, 15 deg C; 30 minutes, 20 deg C

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RX(1) OF 1 
$$\begin{array}{c} \text{CH}_2-\text{OH} \\ \text{HO-CH}_2-\text{C-CH}_2-\text{OH} \\ \text{CH}_2-\text{OH} \\ \text{(step 1)} \end{array} + \begin{array}{c} \text{HO-CH}_2-\text{CH}_2-\text{Ph} \\ \text{(step 2)} \end{array} \begin{array}{c} \text{1. Et3N, PCl3, Xylene} \\ \frac{2. \text{ Et3N}}{3. \text{ NaOH, Water}} \end{array} >$$

REF: Jpn. Kokai Tokkyo Koho, 2004035468, 05 Feb 2004 NOTE: alternative prepn. shown CON: STAGE(1) 30 minutes, room temperature;

room temperature -> 60 deg C STAGE(2) 1 hour, 15 deg C; 30 minutes, 20 deg C

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Jpn. Kokai Tokkyo Koho, 2004018406, 22 Jan 2004
30 minutes, 20 deg C REF:

CON:

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RX(2) OF 2

(step 1)

REF:

Jpn. Kokai Tokkyo Koho, 2004018388, 22 Jan 2004
STAGE(1) room temperature -> 120 deg C; 30 minutes, 20 deg C; CON: 30 minutes

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REF: Jpn. Kokai Tokkyo Koho, 2004018410, 22 Jan 2004

NOTE: alternative prepn. shown

CON: STAGE(1) 20 minutes, room temperature; 1 hour, room temperature; room temperature -> 80 deg C; 1 hour, 80 deg C STAGE(2) 50 minutes, room temperature; 30 minutes,

room temperature

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RX(2) OF 2 
$$\begin{array}{c} \text{CH}_2\text{-OH} \\ \text{HO-CH}_2\text{-C-CH}_2\text{-OH} \\ \text{CH}_2\text{-OH} \\ \text{(step 1)} \end{array} \begin{array}{c} \text{HO-CH}_2\text{-CH}_2\text{-Ph} \\ \text{(step 1)} \end{array} \begin{array}{c} \text{1. Pyridine, PhMe} \\ \text{2. NaOH, Water} \end{array}$$

Jpn. Kokai Tokkyo Koho, 2004018405, 22 Jan 2004 REF:

STAGE(1) room temperature -> 120 deg C; 30 minutes, 20 deg C; CON: 30 minutes

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RX(1) OF 3
$$\begin{array}{c} CH_2-OH \\ HO-CH_2-C-CH_2-OH \\ CH_2-OH \\ (step 1) \end{array} + \begin{array}{c} HO-CH_2-CH_2-Ph \\ (step 2) \end{array} \xrightarrow{\begin{array}{c} 1. \text{ Pyridine, PCl3,} \\ PhMe \\ \hline 2. \text{ PhMe} \end{array}$$

Jpn. Kokai Tokkyo Koho, 2004018387, 22 Jan 2004 REF:

STAGE(1) 1 hour, room temperature; room temperature -> 60 deg C; 30 minutes, 60 deg C; 60 deg C -> room temperature STAGE(2) 20 deg C; 30 minutes, 20 deg C CON:

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RX(1) OF 3
$$\begin{array}{c} \text{CH}_2-\text{OH} \\ \text{HO-CH}_2-\text{C-CH}_2-\text{OH} \\ \text{CH}_2-\text{OH} \\ \end{array}$$

$$\begin{array}{c} \text{1. Pyridine, PCl3,} \\ \text{PhMe} \\ \hline \text{2. PhCH2OH, Pyridine} \\ \end{array}$$

$$\text{(step 1)}$$

REF: Jpn. Kokai Tokkyo Koho, 2004018409, 22 Jan 2004

NOTE: alternative prepn. shown

STAGE(1) 15 minutes, room temperature; 1 hour, room temperature; room temperature -> 80 deg C; 1 hour, 80 deg C STAGE(2) 30 minutes, 15 deg C; 30 minutes, 20 deg C

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REF: Jpn. Kokai Tokkyo Koho, 2004018408, 22 Jan 2004

NOTE: alternative prepn. shown

CON: STAGE(1) 15 minutes, room temperature; 1 hour, room temperature; room temperature -> 60 deg C; 20 minutes, 60 deg C STAGE(2) 30 minutes, 5 deg C; 30 minutes, 20 deg C

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RX(1) OF 2

$$CH_2-OH$$
 $HO-CH_2-C-CH_2-OH$ 
 $CH_2-OH$ 
 $CH_2-OH$ 

REF: Jpn. Kokai Tokkyo Koho, 2004018407, 22 Jan 2004

NOTE: alternative prepn. shown

CON: STAGE(1) 15 minutes, room temperature; 1 hour, room temperature; room temperature -> 80 deg C; 1 hour, 80 deg C STAGE(2) 30 minutes, 15 deg C; 30 minutes, 20 deg C

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Jpn. Kokai Tokkyo Koho, 2004018386, 22 Jan 2004
STAGE(1) 1 hour, room temperature; room temperature -> 60 deg C;
 30 minutes, 60 deg C
STAGE(2) 20 deg C; 30 minutes, 20 deg C CON:

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REF: Jpn. Kokai Tokkyo Koho, 2004018385, 22 Jan 2004

NOTE: alternative prepn. shown

CON: STAGE(1) 8 hours, 180 deg C; 180 deg C -> room temperature STAGE(2) 1 hour, reflux

## L11 ANSWER 21 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

RX(1) OF 3
$$Ph-CH_2-O-P O-CH_2-Ph \frac{1. PhCH2Br}{2. PhMe}$$
(step 1)

REF: Jpn. Kokai Tokkyo Koho, 2004018384, 22 Jan 2004

NOTE: alternative prepn. shown
CON: STAGE(1) 90 minutes, 150 deg C; 150 deg C -> room temperature
STAGE(2) 30 minutes, room temperature

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REF:

PCT Int. Appl., 2003006472, 23 Jan 2003 STAGE(1) room temperature; room temperature -> 105 deg C; 2 hours, 105 deg C; 105 deg C -> room temperature CON:

STAGE(2) room temperature -> 100 deg C; 3 hours, 100 deg C

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$$\begin{array}{c} \text{CH}_2-\text{OH} \\ \text{HO-CH}_2-\text{C-CH}_2-\text{OH} \\ \text{CH}_2-\text{OH} \end{array} \qquad \begin{array}{c} \underline{\text{PhOP}(0)\,\text{Cl2, Pyridine,}} \\ \underline{\text{CH2Cl2}} \end{array} >$$

REF: Jpn. Kokai Tokkyo Koho, 2002097195, 02 Apr 2002

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$$\begin{array}{c|c} \text{CH}_2-\text{OH} \\ \text{HO-CH}_2-\text{C-CH}_2-\text{OH} \\ \text{CH}_2-\text{OH} \end{array} \qquad \begin{array}{c} \text{PhOP(O)Cl2, Pyridine,} \\ \text{CH2Cl2} \end{array}$$

REF: Jpn. Kokai Tokkyo Koho, 2002053587, 19 Feb 2002

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$$CH_2-OH$$
  
 $HO-CH_2-C-CH_2-OH$  +  $HO-(CH_2)_{17}-Me$   $P(OPh)_3$   
 $CH_2-OH$ 

REF: Huaxue Shijie, 42(3), 144-145, 165; 2001

NOTE: no solvent, organotin as catalyst

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REF: Jpn. Kokai Tokkyo Koho, 2000128892, 09 May 2000 NOTE: room temp., 2 h

### L11 ANSWER 27 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

REF: U.S., 5919966, 06 Jul 1999 NOTE: in vacuo, 60.degree.

L11 ANSWER 28 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

REF: U.S., 5917076, 29 Jun 1999 NOTE: 200 mesh pentaerythritol

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$$\begin{array}{c} \text{CH}_2-\text{OH} \\ \text{HO-CH}_2-\text{C-CH}_2-\text{OH} \\ \text{CH}_2-\text{OH} \end{array} + \begin{array}{c} \text{HO-(CH}_2)_{17}-\text{Me} \\ \text{CH}_2-\text{OH} \end{array} \qquad \begin{array}{c} \text{K2CO3, NaOMe, P(OPh)3} \\ \end{array}$$

REF: Faming Zhuanli Shenqing Gongkai Shuomingshu, 1123284, 29 May 1996

NOTE: 160.degree., 1 h

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. 0

REF: Jpn. Kokai Tokkyo Koho, 10017585, 20 Jan 1998, Heisei NOTE: 110-120.degree. for 5 h

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RX(1) OF 1

$$\begin{array}{c|c} & \text{CH}_2\text{-OH} \\ \text{HO-CH}_2\text{-C-CH}_2\text{-OH} & \underline{\text{PhOP}(O)Cl2, Pyridine} \\ & \text{CH}_2\text{-OH} \end{array}$$

REF: Jpn. Kokai Tokkyo Koho, 09169789, 30 Jun 1997, Heisei NOTE: 30 min

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RX(2) OF 4

$$\begin{array}{c} \text{O} \\ \text{||} \\ \text{MeO-C-CH}_2\text{-CH} = \text{CH-Me} \end{array} \begin{array}{c} \text{C:80693-00-1,} \\ \frac{\text{C:14874-82-9, H2, CO,}}{\text{PhMe}} \\ \end{array}$$

REF: Eur. Pat. Appl., 712828, 22 May 1996

### L11 ANSWER 33 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

REF: Ger. Offen., 4318013, 01 Dec 1994

L11 ANSWER 34 OF 40 CASREACT COPYRIGHT 2006 ACS on STN

REF: PCT Int. Appl., 9417082, 04 Aug 1994

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### RX(3) OF 5

O=PH HP=O 2. HCHO, Et3N O=P O CH<sub>2</sub>-OH 
$$CH_2$$
-OH

REF: Ger. Offen., 4221678, 13 Jan 1994

NOTE: paraformaldehyde used

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### RX(1) OF 1

REF: U.S., 5103035, 07 Apr 1992

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Ozone, CH2Cl2, Me2CO

RX(1) OF 5

REF: Zhurnal Organicheskoi Khimii, 26(3), 623-7; 1990 NOTE: Either or both solvents

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REF: Zhurnal Obshchei Khimii, 56(12), 2795-7; 1986

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RX(10) OF 38

Zeitschrift fuer Chemie, 26(10), 360-6; 1986 REF:

J. 4. .

Andrew Freistein 10/707,402

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RX(1) OF 8

PhOH, Et3N, Benzene

REF: Magnetic Resonance in Chemistry, 23(2), 122-6; 1985

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	225.80	748.19
•		
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-3.00

STN INTERNATIONAL LOGOFF AT 10:05:47 ON 19 SEP 2006